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STATE
OF
MONTANA

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DIVISION OF FORENSIC SCIENCE

DEPARTMENT OF JUSTICE

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September, 1981

SHELVED WITH
PERIODICALS

CONGRATULATIONS

To those coroners who have been reporting their medical legal cases to the Division of Forensic Science. There have already been several instances where valuable information has been provided to the coroner and/or sheriff to help in their investigations. Remember, this service is provided 24 hours a day to anyone investigating a violent, unnatural, or any suspicious death.

MISSOULA COUNTY MORGUE

Sheriff/Coroner Ray Froelich, Deputy Sheriff Larry Weatherman and County Attorney R.L. "Dusty" Deschamps have succeeded in petitioning the County Commissioners for an autopsy facility and a body cooler. This will greatly enhance homicide investigation in their community as well as surrounding counties.

KEEPING UP FRONT

Julie Long spent last month at the FBI Academy training in Forensic Serology and Hair and Fiber analysis. Her expertise will provide valuable assistance to Ken Konzak and Arnold Melnikoff who have had to solo in these areas.

KEEPING UP NEW FRONTS

Attorney General Mike Greeley's recently formed policy "New Fronts Against Crime" is being implemented by the Division. Recent conferences have been held in Plentywood and Lewistown where new services provided by the medical examiner and the crime lab have been explained.

NEW DRUGS IN MONTANA

Larry Pederson has recieved two different samples of opium poppy plants at the Montana DFS. These have been recovered in areas populated by Southeastern Asian refugees. Vertical slashes were noted in the petal-less pods - a typical method for recovering the opium latex.

STATE DOCUMENTS COLLECTION

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September, 1981
Hangings
R.L. Rivers, M.D.

The fourteen year old boy had been found hanging from a tree in his backyard. He and his friends had often played with ropes in the tree before. He was found in a kneeling position with his knees two inches above the ground. Some fingernail scratches were observed on the neck near the noose. The distraught mother claims her boy must have been murdered.

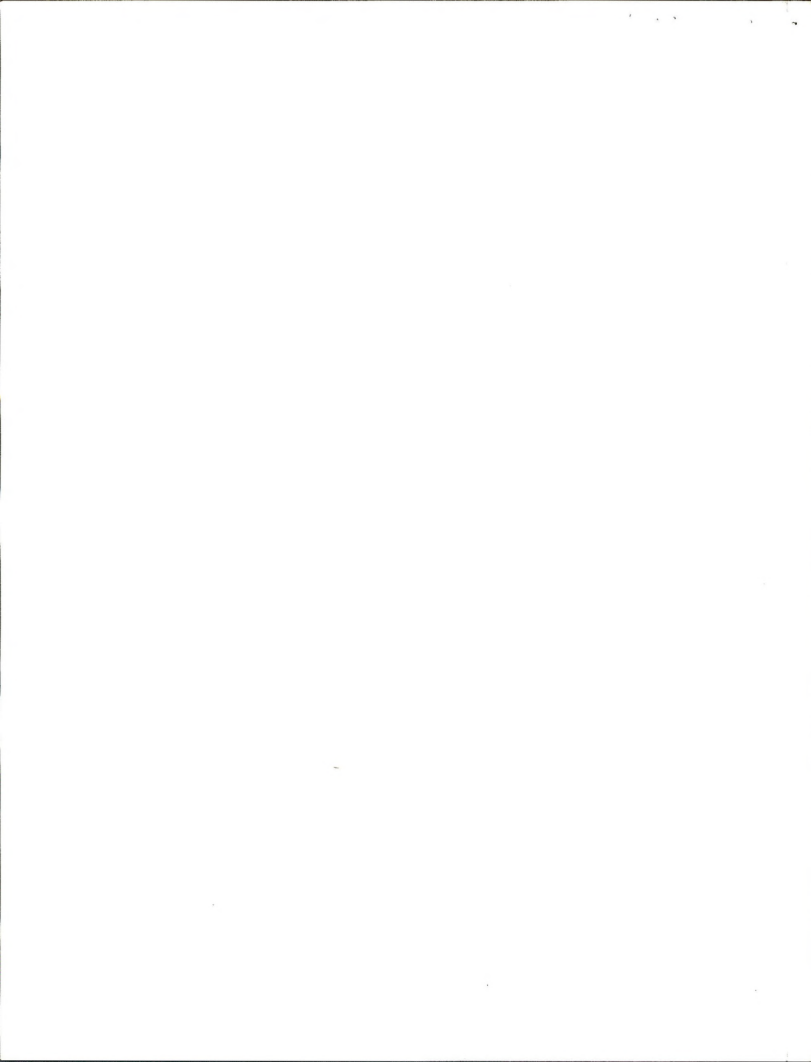
"Doc, can you help us out on this one?" asks the police chief. The Medical Examiner answers "I'm sure I can, since you brought in the rope, the body is unembalmed and you've brought me a few polaroid photos taken at the death scene."

While the pathologist examines the slanting abrasion furrow caused by the rope around the neck, the chief says "We don't know whether it is a homicide, suicide or an accident. Those fingernail marks sure look like he was fighting to get the noose loose. And another thing, how can he strangle when his feet weren't even off the ground?"

"I'll answer you in a minute Joe, but let me make a few short notes here before the autopsy." The doctor dictated "Petechiae in both eyes. No hesitation scars. Lower limb lividity. Neck abrasion above the thyroid prominence or Adam's apple. No contusions of the neck or hands." He stops for a second to review the photograph of the boy still hanging from the tree. "I see he is fully dressed and there are no magazines around. If there are no fractures of the neck cartilages, I believe I can also give you the manner of death in a minute."

QUESTIONS:

1. What is the manner of death?
2. Why can death occur even from a low point of suspension, i.e. feet still on the floor?
3. What is the significance of the fingernail scratches on the neck?
4. Why did the medical examiner want the rope?



ANSWERS:

1. Many types of deaths are based upon ruling out other types of deaths. In this case homicide is unlikely. There are no contusions of the neck or hands to indicate a struggle. The abrasion furrow of the neck was slanting and not horizontal. The latter is seen in a ligature strangulation and this type is usually below the Adam's apple. The petechiae in the eyes and the lower lividity indicate asphyxia by hanging so other means of murder are unlikely.

A hanging death in a young male must always be suspected of being an autoerotic or sexual asphyxia. These are ruled accidental deaths since there is no intent to take their life, but merely to enhance a sexual act or self stimulation. Unfortunately, the method employed often causes a transient loss of consciousness, which then leads to death. These individuals are usually found nude or nearly nude and sometimes in feminine attire. Sexual literature, mirrors, gags and erotic photographs may be found.

Far more likely in this day and age would be a teen age suicide. In the last twenty-five years the number of adolescent suicides have doubled. The various explanations for this increase are innumerable and involve quite a lot of psychology. It was because of this type of death that the "psychological autopsy" came into being. It involves extensive background investigation of the relatives, teachers or employers, and friends of the decedent. More often than not a history of depression is discovered.

2. Experiments have shown that it takes only 4.4 pounds (2KG) of pressure to occlude the jugular vein, 11 pounds (5KG) to occlude the carotid arteries and 33 pounds to occlude the windpipe. Since people with tracheostomies have hung themselves, it becomes obvious that obstructing the airway is not essential in hanging. Most hanging deaths result from the combined effects of obstructing the vessels and airway. The loss of blood to the brain will result in rapid unconsciousness and death will follow in five to twenty minutes depending on the amount of pressure.

3. A victim of hanging may instinctively claw at the suspending noose to relieve the pressure. Rarely, a body is found with the fingers trapped between the noose and the neck.

4. When the rope accompanies the hanging victim, the Medical Examiner can often detect a matching imprint in the neck and certify that this indeed was the instrument of death. This should be photographed (rope and imprint individually and together) and documented as one would a gun or a knife. The position of the knot or the rope around the neck is often crucial in determining the manner of death. The pathologist thus helps the law enforcement agency in corroborating the final verdict. Family members, insurance companies and occasionally the police, may find it difficult to accept the verdict.

